

ABSTRACT

A separating machine for a thinned semiconductor substrate, which separating machine separates a thinned semiconductor substrate from a holding substrate after a semiconductor substrate is bonded to the holding substrate with a thermoplastic resin and a back surface treatment including the thinning of the semiconductor substrate is carried out and which separating machine comprises a pair of vacuum adsorption heads for adsorbing the holding substrate-bonded thinned semiconductor substrate respectively from the holding substrate side and from the thinned semiconductor substrate side opposite to the holding substrate side, wherein at least one of the vacuum adsorption heads has a moving means for adsorbing and holding the holding substrate-bonded thinned semiconductor substrate in a predetermined position together with the other vacuum adsorption head and at least one of the vacuum adsorption heads has a system for moving in a single swing direction for separation after the above adsorption and holding, and a separating method for carrying out the separation with the above separating machine after making a lead.